

IN THE CLAIMS

This listing of claims replaces all prior listings and versions of the claims in the present application.

Listing of Claims:

Claim 1 (Currently Amended): Method for monitoring an oil and gas lubricating device[[(1)]], with which an oil film, while forming striae, can be conveyed by an airflow along a wall of a supply line[[(4)]] to a lubrication point[[(2)]], comprising ~~the following process steps:~~

[[-]] detecting [[the]] a temporal change in the striae[[(12)]] by a striae sensor[[(14)]];

[[-]] generating a striae signal that is representative for the temporal change in the striae[[(12)]]; and

~~characterised by the following process step:~~

[[-]] ~~Smoothening of~~ smoothening the striae signal by calculating an average value of the striae signal over a predetermined averaging interval.

Claim 2 (Currently Amended): Method according to Claim 1, ~~characterised by the following process steps~~ which further comprises:

[[-]] comparing the smoothened striae signal with a predetermined operating limit, which is representative for an oil film that is sufficient for lubrication point lubrication appropriate for operation; and

[[-]] ~~Outputting~~ outputting an operating signal if the smoothened striae signal exceeds the operating limit.

Claim 3 (Currently Amended): Method according to Claim 1 or 2, ~~characterised by the following process step which further comprises:~~

[[-]] ~~Outputting~~ outputting a warning signal if the smoothened striae signal falls below the operating limit.

Claim 4 (Currently Amended): Method according to ~~one of the abovementioned Claims Claim 1, characterised by the following process steps which further comprises:~~

[[-]] comparing the smoothened striae signal with a predetermined warning limit, which is representative for an oil film that is not sufficient for lubrication point lubrication appropriate for operation;

[[-]] outputting the warning signal if the smoothened striae signal falls below the warning limit.

Claim 5 (Currently Amended): Method according to ~~one of the abovementioned Claims Claim 1, characterised by the following process step which further comprises:~~

[[-]] ~~Reading~~ reading out the operating and / or warning limit from a memory unit[[(30)]]].

Claim 6 (Currently Amended): Method according to ~~one of the abovementioned Claims Claim 1, characterised by the following process steps which further comprises:~~

[[-]] specifying the operating and / or warning limit depending on a normalization signal;

[[-]] specifying the smoothed striae signal as an operating and / or warning limit when the normalization signal is applied.

Claim 7 (Currently Amended): Method according to Claim 1 ~~one of the~~
~~abovementioned Claims, characterised by the following process steps which further~~
comprises:

[[-]] specifying the operating or warning limit as a percentage or absolute deviation
of the respective other limit.

Claim 8 (Currently Amended): Method according to ~~one of the abovementioned~~
~~Claims Claim 1, characterised by the following process steps which further comprises:~~

[[-]] ~~Automatic~~ automatically shortening [[of]] the averaging interval when the
warning signal is being output;

[[-]] specifying a long time interval and a short time interval for the averaging
interval.

Claim 9 (Currently Amended): Method according to ~~one of the aforementioned~~
~~Claims Claim 1, characterised by the following process steps which further comprises:~~

[[-]] generating the striae signal representative of the temporal change in the
striae[[(12)]] using opto-electronic means.

Claim 10 (Currently Amended): Method according to ~~one of the aforementioned~~
~~Claims Claim 1, characterised by the following process steps which further comprises:~~

[[-]] measuring the temperature of the oil film;

[[-]] ~~Saving~~ saving the temperature of the oil film when specifying the operating or
warning limit;

[[-]] ~~Smoothening~~ smoothening the striae signal depending on [[the]] a difference
in the temperatures of the saved and measured temperature of the oil film.

Claim 11 (Currently Amended): Method according to Claim 10, ~~characterised by the following process steps which further comprises:~~

[[-]] ~~Adding~~ adding and subtracting temperature-dependent characteristic values to or from the striae signal during the smoothening of the striae signal.

Claim 12 (Currently Amended): Method according to ~~one of the aforementioned Claims Claim 1~~, ~~characterised by the following process steps which further comprises:~~

[[-]] comparing the unsmoothed striae signal with a predetermined malfunction limit that is representative for a striae signal when ~~there is~~ a malfunction in the airflow[[,]] occurs during the smoothening of the striae signal;

[[-]] outputting the warning signal if the unsmoothed striae signal falls below the malfunction limit.

Claim 13 (Currently Amended): Method according to ~~one of the aforementioned Claims Claim 1~~, ~~characterised by the following process steps which further comprises:~~

[[-]] ~~Preconditioning~~ preconditioning [[of]] the striae signal before the smoothening of the striae by calculating an average value of the unsmoothed striae signal over a predetermined time interval.

Claim 14 (Currently Amended): Method according to ~~one of the aforementioned Claims Claim 1~~, ~~characterised by the following process steps which further comprises:~~

[[-]] ~~Preconditioning~~ preconditioning [[of]] the striae signal before the smoothening by removing the constant portion from the unsmoothed striae signal.

Claim 15 (Currently Amended): Method according to ~~one of the aforementioned~~
~~Claims Claim 1, characterised by the following process steps which further comprises:~~

[[-]] ~~Preconditioning preconditioning~~ of the striae signal before the smoothening by
rectifying the unsmoothened striae signal.

Claim 16 (Currently Amended): Method according to ~~one of the aforementioned~~
~~Claims Claim 1, characterised by the following process steps which further comprises:~~

[[-]] amplifying the striae signal, depending on the preconditioned striae signal, to a
predetermined average raw signal value.

Claim 17 (Currently Amended): Method according to Claim 16, ~~characterised by the~~
~~following process steps which further comprises:~~

[[-]] compensating the amplification of the raw signal value by attenuating the
preconditioned striae signal.

Claim 18 (Currently Amended): Method according to ~~one of the aforementioned~~
~~Claims Claim 1, characterised by the following process steps which further comprises:~~

[[-]] detecting a beam of light directed through the striae;

[[-]] generating the striae signal depending on the beam of light.

Claim 19 (Currently Amended): Method according to ~~one of the aforementioned~~
~~Claims Claim 1, characterised by the following process steps which further comprises:~~

[[-]] generating the beam of light[[(15)]] directed through the striae by means of a
light source[[(13)]].

Claim 20 (Currently Amended): Method according to Claim 17, ~~characterised by the following process steps which further comprises:~~

[[-]] calibrating the striae signal by regulating the light intensity of the light source[[(15)]].

Claim 21 (Currently Amended): Method according to Claim 17, ~~characterised by the following process steps which further comprises:~~

[[-]] calibrating the striae signal by regulating the light intensity of the light source[[(15)]] to a predetermined test intensity.

Claim 22 (Currently Amended): Method according to Claim 1 ~~one of the~~ ~~mentioned Claims, characterised by the following process steps which further comprises:~~

[[-]] ~~Filtering~~ filtering the raw striae signal by a filter[[(20)]].

Claim 23 (Currently Amended): ~~Monitoring~~ A monitoring device for an oil and gas lubricating device, wherein with the oil and gas lubricating device, an oil film, while forming striae, can be conveyed by an airflow along a wall of a supply line[[(4)]] to a lubrication point[[(2)]], and the monitoring device is provided with a striae sensor[[(14)]], with which the temporal change in the striae[[(12)]] can be detected and a striae signal can be generated that is representative of the temporal change in the striae[[(12)]], ~~characterised by which comprises~~ a smoothening unit[[(28)]], by means of which the striae signal ~~can be~~ is smoothened and an average value of the striae signal over a predetermined averaging interval ~~can be~~ is calculated.

Claim 24 (Currently Amended): Monitoring device according to Claim 23,
~~characterised in that~~ wherein the monitoring device includes a memory unit[[(30)], from
which an alterably storable operating and / or warning limit ~~can be read~~ is readable during
operation.